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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,321	04/09/2004	Hiroyasu Hasegawa	2842.21US01	9694

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EXAMINER	
YANG, CLARA I	

ART UNIT	PAPER NUMBER
2635	

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/821,321	HASEGAWA ET AL.	
	Examiner	Art Unit	
	Clara Yang	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-9* is/are rejected.

7)☒ Claim(s) *4 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 April 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because "request signal" is misspelled in Fig. 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined

application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1, 2, 5, 7, and 9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 7 of copending Application No. 10/823,160. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons:

- Regarding claims 1 and 2 of the current applicant, claim 7 of Application No. 10/823,160 calls for: (1) an operation switch operated by the operator for driving the actuator (as called for in claim 1); (2) a case for holding the operation switch (i.e., a switch holder as called for in claim 2); and (3) a coil antenna wound around the case (i.e., a coil antenna being arranged adjacent to the operation switch and attached to the switch holder as called for in claims 1 and 2). Claim 7 further calls for the coil antenna transmits a transponder-driving radio wave that causes the transponder to generate electromotive force used to transmit an ID code. Thus claims 1 and 2 of the current application are substantially similar to claim 7 of Application No. 10/823,160.

- Regarding claim 5 of the current application, claim 7 of Application No. 10/823,160 calls for: (1) an operation switch including an operation button (i.e., an operation switch having an operation surface) operated by the operator for driving the actuator; and (2) a coil antenna wound around the case housing the operation switch (i.e., a coil antenna being arranged adjacent to the operation switch). Thus claim 5 of the current application is substantially similar to claim 7 of Application No. 10/823,160.

- Regarding claim 7 of the current application, claim 7 of Application No. 10/823,160 calls for: (1) a portable device including a transponder; (2) an operation switch operated by the operator for driving the actuator; and (3) a coil antenna wound around the case housing the operation switch (i.e., a coil antenna being arranged

adjacent to the operation switch). Thus claim 7 of the current application is substantially similar to claim 7 of Application No. 10/823,160.

- Regarding claim 9 of the current application, claim 7 of Application No. 10/823,160 calls for: (1) a coil antenna, which is arranged around the case of the operation switch (i.e., arranged adjacent to the operation switch), to transmit a transponder-driving radio wave to a portable device; (2) the portable device to receive to transponder-driving radio wave and generate electromotive force used to transmit an ID code; and (3) an operator to operate the operation switch. Thought claim 7 fails to expressly call for the portable device to be held within the vicinity of the operation switch during operation of the operation switch, the portable device must be within the vicinity of the antenna coil arranged around the operation switch in order to receive the transponder-driving radio wave.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

5. Claims 4 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Objections

6. Claims 3 and 4 are objected to because of the following informalities:

The limitation "and the transponder transmits a transponder signal including the ID" should be removed from claims 3 and 4 since the limitation fails to (1) further limit claims 2 and 1 respectively and (2) further define the operation switch of claims 3 and 4.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 5-7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Tado et al. (US 5,973,411).

Referring to claims 1, 5, and 7, Tado's antitheft system, as shown in Fig. 1, comprises: (a) key 1 (i.e., a portable device) including a transponder formed by integrated circuit (IC) $1a_2$ and coil antenna $1a_1$ (see Col. 2, lines 1-13 and Col. 7, lines 21-25); (b) key cylinder 2 (i.e., an operation switch) having a key receiving surface (i.e., an operational surface) that includes keyhole $2a_1$ and is rotated/operated by a user for closing ignition key switch 2*b* and driving engine start decision means 5A (see Col. 2, lines 17-29 and Col. 7, lines 21-25), wherein engine start decision means 5A is an actuator; and (c) coil antenna $2a_2$ is adjacent to key cylinder 2 and used for transmitting a radio frequency (RF) signal (i.e., a transponder-driving radio wave) that powers key 1's transponder via electromagnetic induction and causes the transponder to transmit its ID code signal (see Col. 2, lines 30-52; Col. 7, lines 21-25; and Col. 8, lines 6-14). Per Tado, when code collating means 3A determines that key 1's ID code matches the one stored in EEPROM 3*e*, control unit 30*b* sends an "engine start" enabling signal to engine start decision means 5A, which enables the engine starting operation if engine start decision means 5A determines that the engine start enabling signal is authentic (see Col. 8, lines 21-50 and Col. 10, lines 54-56).

Regarding claim 2, as shown in Fig. 1, key cylinder 2 is enclosed within a housing (i.e., switch holder), and coil antenna $2a_2$ is attached to the housing via the coils of the antenna (see Col. 2, lines 17-24).

Referring to claim 6, as explained in the previous rejections of claims 1, 5, and 7, Tado teaches that key cylinder 2 enables/drives engine start decision means 5 (i.e., an actuator) via an engine start enabling signal when key 1's transponder transmits an ID code that matches the one stored in EEPROM 3*e* of code collating means 3A (i.e., a vehicle controller). Tado's key cylinder 2 has an operational surface that includes keyhole $2a_1$ for enabling a user to rotate/operate key cylinder 2 via key 1 (see Col. 7, lines 64-66 and Col. 10, lines 7-9). By rotating key cylinder 2, ignition key switch 2*b* closes and causes engine start decision means 5A to be enabled if key 1's ID code matches the one stored in EEPROM 3*e* (see Col. 8, lines 21-50 and Col. 10, lines 54-56). In Fig. 1, Tado illustrates that key cylinder 2 and its elements (e.g., keyhole $2a_1$ and ignition key switch 2b) are in a housing (i.e., switch holder) and that coil antenna $2a_2$ is provided around keyhole $2a_1$ (see Col. 2, lines 17-24), thereby forming a ring that surrounds key cylinder 2's operational surface. Per Tado, coil antenna $2a_2$ is adjacent to key cylinder 2 and transmits an RF signal (i.e., a transponder-driving radio wave) that powers key 1's transponder and causes the transponder to transmit its ID code signal (see Col. 2, lines 30-52; Col. 7, lines 21-25; and Col. 8, lines 6-14).

Referring to claim 9, Tado's method for operating key cylinder 2 comprises inserting key 1 into keyhole $2a_1$ (i.e., holding the portable device in the vicinity of key cylinder 2) and rotating/operating key cylinder 2. Tado's coil antenna $2a_2$ is adjacent to key cylinder 2 and transmits an RF signal that powers key 1's transponder and causes the transponder to transmit its ID code signal (see Col. 2, lines 30-52; Col. 7, lines 21-25; and Col. 8, lines 6-14). As explained in the previous rejections of claims 1, 5, and 7, Tado teaches that key cylinder 2 enables engine start decision means 5 via an engine start enabling signal when key 1's transponder transmits

an ID code that matches the one stored in EEPROM 3*e* of code collating means 3A (i.e., a vehicle controller).

9. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Stippler (US 6,218,932).

Referring to claim 8, Stippler's security system, as shown in Fig. 1, comprises: (a) trigger switches 4 and 12 (i.e., operation switches) operated by a driver for driving actuators, such as door locks 6 and engine controller/immobilizer 7 respectively (see Col. 3, lines 22-27 and 38-46); (b) transceiver unit 2 for transmitting a challenge/request signal (see Col. 3, lines 16-29); and (c) transponder 5 (i.e., a portable device) having transponder IC 10 (see Col. 3, lines 22-32 and 63-67; and Col. 4, lines 18-30). Per Stippler, when a driver intends to start the vehicle's engine, the driver actuates trigger switch 12, causing the process shown in Fig. 4 to take place (see Col. 5, lines 66-67 and Col. 6, lines 1-3). Upon actuation of trigger switch 12, transceiver 2 transmits a first challenge signal via antenna 3 with a predetermined power A (see Col. 6, lines 1-3). This first challenge signal is understood to be a transponder-driving radio wave since transponder 5 converts the signal into power such that it can receive the challenge signal and transmit a first response A, which includes its ID code and a measured reception power X (see Col. 4, lines 12-14 and Col. 6, lines 3-7). Transceiver 2 evaluates response A and transmits a second challenge (i.e., a request signal) via second antenna 3, causing transponder 5 to measure the reception power and transmit a second response B, which includes its ID code and a measured reception power Y (see Col. 6, lines 8-12). Transceiver 2 evaluates response B and releases immobilizer 7 to start the internal combustion engine if (1) the ID codes in responses A and B (i.e., a first and third ID code) match a predetermined ID code stored in transceiver 2 (i.e., a second and fourth ID code) and (2) measured reception powers X and Y are different (see Col. 5, lines 28-35 and 66-67; and Col. 6, lines 17-22). Stippler's transceiver 2 is: (a) a first determination unit for

determining whether the ID code in response B (i.e., the third code) matches the one (i.e., the fourth code) stored in transceiver 2 (see Col. 5, lines 28-35 and 66-67); (b) a first control unit for enabling/driving door locks 6 or immobilizer 7 when the first determination unit determines that the ID code in response B matches the one stored in transceiver 2 (see Col. 5, lines 28-35 and 66-67; and Col. 6, lines 17-22); (c) a second determination unit for determining whether the ID code in response A (i.e., the first code) matches the one (i.e., the second code) stored in transceiver 2 (see Col. 5, lines 28-35 and 66-67); and (d) a second control unit for enabling/driving door locks 6 or immobilizer 7 when the first determination unit determines that the ID code in response A matches the one stored in transceiver 2 (see Col. 5, lines 28-35 and 66-67; and Col. 6, lines 17-22). As shown in Fig. 1, coil antennas 2 are adjacent to door locks 6.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1-3, 5, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wittwer et al. (US 6,776,016) in view of Tado et al. (US 5,973,411).

Referring to claims 1, 2, 5, 7, and 9, Wittwer's system comprises housing 10 (i.e., a switch device) comprising actuator 35, wherein actuator 35 is pushbutton (i.e., an operation switch) operated by a user (as called for in claims 1, 7, and 9) having an operational surface that enables actuator 35 to be operated by the user (as called for in claim 5) and is connected to the motor (i.e., an actuator) for enabling the motor when key 50's ID code matches a predetermined ID code stored within housing 10's transponder 43 (see Col. 5, lines 35-67 and Col. 6, lines 1-10). Because Wittwer teaches that housing 10 has a transponder 43 that determines if key 50 is valid either electrically or electromagnetically (see Col. 5, lines 35-43), key 50 is understood to also have a transponder in order for transponder 43 to read key 50's identification via electromagnetic communication; thus both housing 10 and key 50 must have antennas to communicate electromagnetically. In addition, because key 50 is inserted into housing 10's receptacle 11 in order for transponder 43 to determine if key 50 is valid (see Col. 3, lines 34-36 and Col. 5, lines 35-43), housing 1's antenna must be adjacent to actuator 35, and Wittwer's method includes the step of pushing actuator 35 while housing 10 holds key 50 in the vicinity of actuator 35, as called for in claim 9. Wittwer, however, fails to expressly teach housing 1 having a coil antenna for transmitting a transponder-driving radio wave that causes key 50's transponder to generate power and transmit its ID code (as called for in claims 1, 5, 7, and 9) and that the coil antenna is attached to housing 1 (as called for in claim 2).

In an analogous art, as explained in the previous 35 USC § 102(b) rejection of claims 1, 5, 6, 7, and 9, Tado teaches key cylinder 2 (i.e., an operation switch) having coil antenna $2a_2$ that is arranged around key cylinder 2 for transmitting an RF signal that powers key 1's transponder and causes key 1's transponder to transmit its ID code. Coil antenna $2a_2$ is attached around key cylinder 2's housing via the antenna's coils.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wittwer's housing 1 as taught by Tado because arranging a coil antenna around housing 1's receptacle 11 such that the coil antenna transmits an RF signal for powering key 50's transponder and causing key 50's transponder to transmit its ID code eliminates key 50's need for a battery.

Regarding claim 3, Wittwer, as modified by Tado, also teaches that actuator 35's surface includes a display portion for displaying that states of the motor (see Wittwer, Col. 6, lines 12-23) and that printed circuit board 66, as shown in Figs. 2 and 8 includes a lighting circuit formed by diodes 46 and 46' for illuminating fields 38 and 38' based on the available functions for actuator 35 (e.g., start the motor or stop the motor) and transponder 43, which must have a demodulation circuit for demodulating key 50's ID code signal (see Wittwer, Col. 5, lines 35-49; Col. 6, lines 12-23; and Col. 7, lines 29-32).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Frenzel et al. (US 5,729,057) teach an antitheft device for a vehicle comprising a key having a transponder and a lock having a keyhole for receiving the key and an antenna in the vicinity of the lock. The antenna has a lighting device for illuminating the region around the keyhole, wherein the lighting device is lit when the engine is off and is off when the engine is on.

- Nakamura (US 5,734,330) teaches an antitheft device for a vehicle comprising a key having an IC transponder and an ignition switch having a coil antenna arranged around the ignition switch's keyhole.

- Kito et al. (US 6,188,140) teach an ignition switch communicating with transponder 7 via antenna coil 7, which is wound around the switch's key cylinder 23.

- Bruhnke et al. (US 6,510,517) teach an authentication method comprising a vehicle transceiver generating an RF field, which powers a transponder and causes the transmitter to transmit its ID code. Upon receiving the ID code, the vehicle transceiver transmits a challenge (i.e., a request code), causing the transponder to transmit a checksum loop and response.

- Yanaka (US 6,816,059) teaches an antitheft system comprising ECU 16 and ECU 18 that both check key 30's ID code, which is transmitted by the key's transponder and received by an antenna coil arranged around key cylinder device 10, prior to actuating the engine and shifting device.

- Greenwood et al. (US 6,937,136) teach a vehicle security system having a starter button. When the starter button is pressed, the vehicle unit transmits a first signal, causing the transponder to transmit its ID code. If the ID code is valid, the vehicle unit then transmits a second signal, causing the transponder to transmit its ID code. If the second ID code is valid, the engine is started.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (571) 272-3062. The examiner can normally be reached on 8:30 AM - 7:00 PM, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CY
15 March 2006

BRIAN ZIMMERMAN
PRIMARY EXAMINER